BAUSCH'S HOMOGENEOUS IMMERSION OBJECTIVES.—The Bausch & Lomb Optical Company, Rochester, which, under the able supervision of Mr. Edward Bausch, is making remarkable progress in the construction of lenses, has added to its list a series of homogeneous immersion objectives, from $\frac{1}{4}$th to $\frac{1}{25}$th inch, claiming an angular aperture of 140° in medium equivalent to crown glass. They are made adjustable, and up to $\frac{1}{12}$th inch cost from $70 to $100. By a change of adjustment they are capable of use as water or glycerine immersion. An immersion illuminator of ingenious construction is made for use with them. New $\frac{1}{4}$th, dry, of 140° is also made, with long working focus, and so well corrected that it will resolve No. 18 or No. 19 of Möller's test-plate in balsam.

LEHIGH VALLEY MICROSCOPICAL SOCIETY.—This new society held its February meeting in Easton, with a good attendance. Dr. Isaac Ott described and illustrated Dr. Stohrer's (of Leipsic) plan for registering the growth of plants, and confirmed that author's hypothesis that during the day plants do not grow as rapidly as at night. Mr. F. Wolle exhibited specimens of filamentous alga, illustrating a growth in some instances of from one-half to three-quarters of an inch per hour. Mr. E. A. Rau also exhibited botanical specimens illustrating the growth of the lower orders. Other objects were shown by E. P. Seip and Breinig, and Mr. G. W. Stout.

PIGEON-POST FILMS.—Having obtained a supply of the gelatine films used for transmission of news by pigeon-post during the siege of Paris (the expedient of posting despatches in the form of microscopic photographs, by the way, having been suggested by Sir David Brewster nearly fifty years ago), the editor of this department of the NATURALIST will take pleasure in sending an unmounted specimen, sufficient for a microscopic object, to any person sending him a stamped and directed envelope for that purpose. Return exchange optional.

BLOOD STAINS ON STEEL.—Dr. M. C. White, of New Haven, has been able to recognize and measure, by means of the vertical illuminator and a eighth objective, blood-corpuscles upon a steel instrument that had been exposed during two winters in the woods.

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SCIENTIFIC NEWS.

— The annual report of the Boston Society of Natural History for 1881, while recording progress in the arrangement of the museum and the issue of its publications, shows the amount of general interest felt by the citizens at large in the popular work of the society in the diffusion of science. Two ladies have generously paid the entire expenses of the Teachers' School of Science estab-

lished by the society, lectures having been delivered by Professors Cross, Hyatt, Goodale and Mr. W. O. Crosby. The average attendance on these lectures was at first 400. As the result of these lectures Mr. Augustus Lowell recently sent word that the society would receive an annual donation of $1500, to be expended in the Teachers' School of Science. The laboratory of the society has been used the past year by a Saturday morning class for teachers in zoölogy, a class in zoölogy for the Boston University, a class in zoölogy and palæontology from the Massachusetts Institute of Technology, a special class in biology, and also in physiology, under the exclusive control of Mr. Van Vleck. Other donations for educational purposes under the auspices of the society are recorded.

— The reports of the Tenth Census are concerned much more with the material resources of the country, and has invited the coöperation of expert scientists to a far greater extent than heretofore. This is good evidence that scientific ideas have as never before impressed themselves upon the people and government. This will lead to a truer economy and a wiser administration of all subjects relating to the natural resources of the country. Besides the admirable report on the fur seal, which is noticed elsewhere, we have received an elaborate report on the Oyster Industry, prepared by Mr. Ernest Ingersoll, under the direction of the Commissioner of Fish and Fisheries. It consists of 250 quarto pages, with suitable illustrations. The account of the mode in which the starfish feeds upon the oyster is in some respects new to us. The excellent researches of Dr. Brooks upon the embryology of the oyster are given in full with his original drawings, and this illustrates how often what at first sight appears to be abstruse science and most remote from any practical issue, becomes available and necessary in such a practical matter as the oyster fishery.

— The eminent physiologist and anatomist, Professor Theodor Schwann, who in 1839 published his famous "cell theory," which made such a revolution in biology, and has done so much to simplify our conceptions of the general structures of organized bodies, died at Liége in February. Although active as a teacher, in late years Professor Schwann did not publish much, but he held to biology very much the same position maintained by Faraday in physics. He was born in 1810, was an assistant of J. Müller, the great anatomist, and afterwards was appointed to a professorship in the University of Liége, which he held until the time of his death. In 1848, on the fortieth anniversary of Schwann's professoriate, deputations from all the important universities in the world went to Liége and presented addresses, while all distinguished biologists contributed their cartes to an album which was presented to the Professor.

— The report of P. W. Norris, superintendent of the Yellowstone National Park, describes the recent violent eruptions of a geyser which he calls the "Excelsior." During much of the summer of 1881 this geyser sent up to a height of from 100 to 300 feet, sufficient water to render the rapid Fire Hole river, nearly 100 yards wide, a foaming torrent of steaming hot water, and hurled rocks of from one to one hundred pounds' weight around the edges of the crater. When the geyser is not in motion the column of steam rising from the crater forms a conspicuous landmark in the park. A new map of the park accompanies the report.

— At the last meeting of the Quekett Microscopical Club, Mr. F. Enock explained a new method of protecting cells from damage by external pressure upon the cement, his device consisting of a small metallic ring of angular section, which at the same time fitted closely round the cell and overlapped the margin of the cover-glass. It was believed that when placed in position and properly cemented round it would effectually prevent the escape of glycerine.

— Professor DuBois Raymond, in a recent address before the surgeons of the French army, adopts the dynamic theory of heredity originally proposed by Cope in 1871, and subsequently elaborated by Haeckel under the name of perigenesis. He does not credit either of these naturalists.

— The milk of the elephant, according to Dr. Charles Doremus (America), is the richest that he has ever examined, containing less water and more butter and sugar than any other. It has a very agreeable taste and odor.

— Dr. William A. Hammond has recently read a paper on the mental constitution of Guiteau, in which he takes the ground advocated by the NATURALIST in its August, 1881, number.

— The Naturalist Brazilian Exploring Expedition, under Mr. Herbert Smith, left Rio for the interior, Jan. 1, 1882.

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PROCEEDINGS OF SCIENTIFIC SOCIETIES.

CALIFORNIA ACADEMY OF SCIENCES. Dec. 5.—At this meeting Professor Davidson again presided after an absence of several months in the field in connection with the work of the U. S. Coast Survey. There was a large attendance. Among the donations to the museum was one from E. F. Gerald of a fine specimen of vanadinite, the first discovered in the Pacific States or Territories. It was found forty-five miles above Yuma. Dr. W. F. McAllister presented an aboriginal skull, taken many feet below the surface at Mount Goat, Tombstone District. Captain C. L. Hooper of the *Corwin* donated two specimens of Emperor